medication was still significant. Whether this "near doubling to 2" of episodes indicates a successful intervention must be up to women with depressed desire to decide.

Side effects were similar in the 3 groups, but there was a 20% increase in hair growth in the 300-ug group compared with 10% in the placebo group. A concern was that 4 of the 800 participants developed breast cancer over the year's surveillance-2 after 4 months of treatment and 1 whose disease probably predated the trial—and all received active treatment. Although possibly due to chance, a causal association must be considered.

The authors suggest these improvements are clinically valuable, offering relief for women with hypoactive sexual desire disorder and low serum estrogen levels.

Hormonal Contraception

The Effects of Hormonal Contraception

Reviewed by Athol Kent, MBChB, MPhil, FRCOG

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[Rev Obstet Gynecol. 2009;2(1):66]

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Physiologic and Psychologic Symptoms Associated With Use of Injectable Contraception and 20-Microgram Oral Contraceptive Pills

Berenson AB, Odom SD, Breitkopf CR, Rahman M. Am J Obstet Gynecol. 2008;199:351.e1-351.e12.

There are many claims made about the beneficial effects of hormonal contraceptives other than their ability to prevent pregnancy. Studies have tracked women's responses to oral contraceptives (OCs) or depot medroxyprogesterone acetate (DMPA), but few have taken into account the woman's entry status or baseline symptoms, and fewer still have looked at control groups on nonhormonal contraception. Another problem has been the duration of follow-up, which should be longer than 1 year to properly assess the steady state of a changed hormonal environment.

A study by Berenson and colleagues deals with the issues of baseline status and prolonged use in a series of women using injectable DMPA and low-dose OCs (typically 20 µg estrogen-containing pills).

The first important finding was that symptoms are common in the absence of contraceptive use, such as acne, cyclical mastalgia, cramping, and mood swings. They found these symptoms improved on sustained use of OCs compared with control groups, and there was no evidence that depression was a problem, despite lowered mood being a commonly quoted negative effect among those prescribing OCs.

The most frequent side effect was intermenstrual bleeding with OCs and an increased risk of bleeding for more than 20 days, amenorrhea, weight gain, and loss of energy and libido on DMPA. Most of these effects resolved after 6 months and almost all resolved by 12 months, with amenorrheaic women often welcoming the side effect.

Finally, the researchers found that women were not clearly informed of the potential side effects, or of their resolution with ongoing use. They recommend careful counseling about what to expect and more frequent follow-up after initiation to provide reassurance or a change to another method if required.

Hormonal Contraception and Bone Mineral Density

Reviewed by Athol Kent, MBChB, MPhil, FRCOG

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[Rev Obstet Gynecol. 2009;2(1):66-67]

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Effects of Depot Medroxyprogesterone Acetate and 20-Microgram Oral Contraceptives on **Bone Mineral Density**

Berenson AB, Rahman M, Breitkopf CR, Bi LX.

Obstet Gynecol. 2008;112:788-799.

Hormonal contraceptives negatively affect bone mass density (BMD), but the effect is small and reversible. Low-dose OCs in young women are associated with less than 0.5% BMD loss in the hip and spine.

Berenson and colleagues also looked at BMD changes with DMPA and found up to a 5% loss. This is potentially significant in young women. They discovered that the effect was temporary and those who stopped using DMPA gained BMD at about 2.5% per year.